Faber, V.B.

FABER, V.B., prof.

S.P.Botkin, an outstanding teacher. Klin.med. 35 no.8:26-36 Ag '57.
(MIRA 10:11)
(EDUCATION, MEDICAL
contribution of Sergei P.Botkin)
(BOTKIN, SERGEI PETROVICH, 1832-1889)

FARBER, V.B., prof.

Leukemoid reactions of the blood system [with summary in English]. Probl.gemat. i perel. krovi 3 no.4:42-47 Jl-Ag '58 (MIRA 11:8)
(LEUKEMIA,
leukemoid reactions (Rus))

FARBER, V.B., prof.

K.K. Zeidlits as a clinician. Klin.med. 36 no.1:154-158 Ja '58.
(MIRA 11:3)

(ZEIDLITS, KARL KARLOVICH, 1798-1885)

FARBER, V.B., prof.

M.I. Arinkin, an outstanding figure in Soviet medicine; on the 10th anniversary of his death. Probl.gemat. i perel.krovi 4 no.2:40-46 F '59. (MIRA 12:2)
(BIOGRAPHIES,
Arinkin, Mikhail I. (Rus))

FARBER, V.B., prof.

Basic principles in the treatment of acute radiation injuries. Terap. arkh. 31 no.8:12-17 Ag '59. (MIRA 12:11)

1. Iz kafedry terapii dlya usovershenstvovaniya vrachey No.1 (nach. - prof. P.I. Shilov) Voyenno-meditsinskoy ordena Lenina akademii imeni S.M. Kirova.
(RADIATION INJURY therapy)

FARBER, V.B., prof. (Leningrad)

Sergei Sergeevich Botkin; on the 100th anniversary of his birth.
Klin.med. 37 no.12:134-138 D '59. (MIRA 13:4)
(BOTKIN, SERGEI SERGEEVICH, 1859-1910)

SHUL'TSEV, G.P., polkovnik meditsinskoy sluzhby, doktor med. nauk; FARBER, V.B., polkovnik meditsinskoy sluzhby, professor

"Field therapy in military medicine," edited by B.D.Ivanovskii. Reviewed by G.P.Shul'tsev, V.B.Farber. Voen.-med. zhur. no.3:89-95 Mr '60. (MIRA 14:1)

(MEDICINE, MILITARY)
(IVANOVSKII, B.D.)

FARBER, V.B.; KULAKOV, V.I.

Problem of the combination of leukemias with neoplastic processes.
Probl.gemat.i perel.krovi 5 no.6:56-61 Je '60. (MIRA 13:12)

(LEUKEMIA) (TUMORS)

FARBER, V.I.

Checking the introduction of standards. Standartizatsiia 25 no. 5:47-48 My '61. (MIRA 14:5)
(Standardization)

L 18738-66 EWT(m)/EWA(d)/EWP(t) JD/WB

ACC NR: AP6005136 SOURCE CODE: UR/0126/66/021/001/0048/0053

AUTHOR: Shklyar, R. S.; Smirnov, M. A.; Shteynberg, M. M.; Sokolkov, Ye. N.; Farber, V. M.

ORG: Ural Polytechnic Institute im. S. M. Kirov (Ural'skiy politekhnicheskiy institut); Institute of Metal Physics, AS USSR (Institut fiziki metallov AN SSSR)

52
B

TITLE: Investigation of the fine structure of austenitic steel with intermetallide hardening, deformed over a broad range of temperatures

SOURCE: Fizika metallov i metallovedeniye, v. 21, no. 1, 1966, 48-53

TOPIC TAGS: fine structure, austenitic steel, x ray analysis, plastic deformation, metal grain structure/EI612K austenitic heat resistant steel

ABSTRACT: Knowledge of the type of fine structure arising in the hot- and cold-worked metal as a function of the regime of its deformation is a prerequisite to selecting the optimal regimes of its hardening. In this connection, the authors radiographically examined fine structure of austenitic heat-resistant steel EI612K (0.08% C, 14.9% Cr, 36.1% Ni, 3.25% W, 3.8% Co, 0.65% Ti, 1.26% Al) according to the shape, structure and intensity of the $(220)_\alpha$ and $(311)_\beta$ reflexes, with measurements of the lattice constant of the solid solution. Hardening phases were isolated by means of electrolytic dissolution. Texture was examined following various regimes of defor-

Card 1/2 UDC: 669.15.018.45 + 157.97

ACC NR: AP6005136 O

mation. Prior to their radiographic examination the specimens were heated to 1180°C for 2 hours, whereupon they were partially cooled at an average rate of 500 deg/min to various temperatures within the 1100-400°C range. The exposure to various partial-cooling temperatures in the furnace (1100-700°C) and in a salt bath (600 and 400°C) lasted 3 minutes. After this part of the specimens was deformed at these temperatures in a grooved rolling mill with 25-30% reduction in area and with subsequent water quenching, while the other part was quenched without prior deformation. It was established that quick partial cooling leads to the comminution of grains into fragments. Plastic deformation at 1100 and 1000°C intensifies this fragmentation of structure. At lower deformation temperatures (900-20°C) the formation of fragmented structure is not observed. Decomposition of the supersaturated solid solution was observed throughout the temperature range investigated. Texture-formation occurs already in the presence of relatively small deformation (20-30%) and this must be taken into account, since texturedness of the material complicates the analysis of radiographic data. Roentgenograms of the specimens display a large number of Laue reflections, as well as isolated distinct reflexes $(220)_\alpha$ and $(311)_\beta$. The Laue reflections often consist of two spots displaced relative to each other and linked by a common background; the reflexes $(220)_\alpha$ and $(311)_\beta$ became subdivided into several overlapping subspots; all this points to an intensive fragmentation of the grains, particularly on partial cooling to 800-700°C. Orig. art. has: 3 figures and 2 tables.

SUB CODE: 11, 13, 20/ SUBM DATE: 20Jan65/ ORIG REF: 008/ OTH REF: 001

Card 2/2 SM

FARBER, Ye.S., inzh.

Transportable units for the construction sites of electric power plants. Energ. stroi. no.22:7-15 '61. (MIRA 15:7)

1. Moskovskiy filial Vsesoyuznogo instituta po proyektirovaniyu organizatsiy energeticheskogo stroitel'stva.
(Buildings, Portable) (Electric power plants)

FARBER, Ye.S., inzh.

Mechanized construction of temporary structures. Energ. stroi. no.34: 99-100 '63. (MIRA 17:1)

1. Moskovskiy filial Vsesoyuznogo instituta po proyektirovaniyu organizatsiy energeticheskogo stroitel'stva.

FABER, Yu. D.

"12-Cable System of High-Frequency Telephony on Cable Lines (K-12)". One of a series of Telecommunications lectures given by experts in the scientific research institutes and educational institutes.

SO: Vest. Svyazi, p 24, No. 6, 1952.

FARBER, Yu. D., PEKARSKIY, D. Ye., STEPANOV, G. N.

"THE VUS-21 AUXILIARY REMOTELY SUPPLIED REPEATER STATION"

Vestnik Svyazi, No 8, 1952, pp 3-5

Translation M-1284, 8 Nov 56

FARBER, Yu. D. Engineer at the Assembly and Measurement Bureau, Intercity Communications Construction Organization.

"Placement of VUS-12 Stations on Trunk Lines"
Vestnik Svyazi, No. 12, 1954. pp 12-14

Translation M-3,053,361 14 Feb 1957

FARBER, Yu.D.

Modernizing ISA-2 measuring stands. Vest.sviazi 14 no.4:9-12 Ap '54. (MLRA 7:6)

1. Inzhener Montazhno-izmeritel'nogo upravleniya tresta "Mezhgorsvyaz'stroy". (Telephone--Testing)

FARBER, Yu. D.

SIMONOVA, G.V.; ROZOVSKAYA, M.I.; FARBER, Yu.D.

Experience in tuning trunk lines condensed with V-12 apparatus. Vest.sviazi 14 no.9:18-20 S '54. (MLRA 7:10)

1. Glavnyy inzhener Montazhno-izmeritel'nogo upravleniya tresta "Moskgorsvyaz'stroy." (for Simonova) 2. Inzhenery Montazhno-izmeritel'nogo upravleniya (for Rozovskaya, Farber).
(Telephone lines)

Translation M-564, 28 Jun 55

FARBER, Yu.D., inzhener.

Adjusting high-frequency aerial trunkline channels under difficult meteorological conditions. Vest.sviazi 15 no.12:5-7 D '55. (MLRA 9:3)

1. Montashnoye-izmeritel'noye upravleniye trasta "Mezhgorsvyaz'stroy". (Electric lines--Overhead)
(Telecommunication--Cold weather operation)

Translation M-1248, 27 Sept 56

FARBER, Yu.D.

Interference protection for long-distance communication channels.
Elektrosviaz' 10 no.10:35-44 O '56. (MLRA 9:11)
(Telephone lines)

FARBER, Yu.D.

Resonant two-terminal networks for tuning long-distance cables. Vest.sviazi 16 no.4:6-8 Ap '56. (MLRA 9:9)

1.Inzhener Montazhno-izmeritel'nogo upravleniya tresta "Mezhgorsvyaz'stroy".
(Telephone cables)

TELEPHONY

FARBER, Yu. D.

"Noise Rejection of Various Channels of Multi-Channel Systems Used for Multiplexing Symmetrical Cables" by Yu. D. Farber, Engineer of Wiring Administration of the "Mezhgorsvyaz'stroy" Trust. Vestnik Svyazi, No 12, December 1957, pp 5-7.

Discussion of factors that effect the internal noise voltages in various channels of the K-24 multiplexing system, and proposal for a simplified method of determining the expected values of this voltage.

Card: 1/1

TELEPHONY

FARBER, Yu. D.

"Use of Transistors in Amplifiers for Multi-Channel High Frequency Telephony Systems" by Yu. D. Farber. Elektrosvyaz', No 12, December 1957, pp 50-57.

The article treats essentially the application of transistors in the Russian K-24 24 channel system.

Card: 1/1

FARBER, Yu.D., inzhener.

Interference killing feature for high-frequency channels of main cable lines. Vest.sviazi 17 no.1:9-12 Ja '57. (MLRA 10:2)

1. Montazhnoye upravleniye tresta "Mezhgorsvyaz'stroy."
(Electric cables)

SOV/111-58-11-9/26

AUTHOR: Farber, Yu.D. and Shliomovich, Ye.M., Engineers of "Mezhgorsvyaz'stroy"

TITLE: **Communication Mains Using Transistor Amplifiers** (Magistral'nyye svyazi s usilitelyami na poluprovodnikovykh triodakh)

PERIODICAL: Vestnik svyazi, 1958, Nr 11, pp 10-11 (USSR)

ABSTRACT: Scientific research institutes of the radio industry in cooperation with "Mezhgorsvyaz'stroy have developed transistor amplifiers for repeater stations. The "VKUS-24" has three stages: the first is equipped with one "P6D" transistor; the other two stages have one "P6G" transistor each. The models installed on condensed communication lines have cylindrical housings, 145 mm long and 40 mm in diameter. They require 5-8 milliamps at 24 volts dc. At a frequency of 108 kc the amplification amounts to about 4.7 nepers. Figure 1 shows the circuit diagram of another two-stage amplifier with one "P1A" and one "P1B" transistor. It is contained in a housing 75 x 75 x 75 mm. At a frequency of 0.8 kc the amplification is 2.7 nepers. A current of 5-7 milliamps is re-

Communication Mains Using Transistor Amplifiers

quired at 24 volts dc. Further, a LF loudspeaker amplifier is mentioned which has three stages. The first stage has one "P1D" transistor, the second has one "P6A" and the third stage has two "P2B" transistors, the latter work in a push-pull system. At a frequency of 0.8 kc the amplification is 4 nepers. A current of 8-12 milliamps is required at 24 volts dc. The amplifier is enclosed in a case of 156 x 75 x 75 mm. Experimental investigations and measurements showed the suitability of transistor amplifiers for reducing the size of telephone equipment.
There is 1 circuit diagram.

ASSOCIATION: "Mezhgorsvyaz'stroy"

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SOV/106-58-11-7/12

AUTHOR: Farber, Yu.D.

TITLE: The Choice of the Parameters of High-Frequency Transistor Amplifiers for Trunk Cables (K vyboru parametrov poluprovodnikovykh usiliteley VCh dlya kabel'nykh magistraley).

PERIODICAL: Elektrosvyaz', 1958, Nr.11, pp.52-61 (USSR)

ABSTRACT: The advent of transistor amplifiers makes it necessary to reconsider those factors which control the distribution of repeater points along a trunk line. A method is given of determining the necessary gain and gain adjustment limits of transistor amplifiers without a.g.c. for multi-channel high-frequency telephone systems. If the measured level at the output of an amplifier is P_y and the level of the characteristic noise in the frequency band of the signal channel at the input to the amplifier is P_π, then the noise power coming from the amplifier at a point l, km from it where the measured level is P_o, is given by (1). In this expression, β_{max} is the attenuation per km of the cable at the frequency considered for maximum ground

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The Choice of the Parameters of High-Frequency Transistor Amplifiers for Trunk Cables.

temperature, b_{cm} is the attenuation of the station equipment at the same frequency, A is a parameter, constant for a given h.f. system. Strictly speaking P_v and l_i are interdependent; however, since in the present work only characteristic amplifier noise is considered P_v will appear as an independent constant. For a cable length L the total characteristic amplifier noise must not exceed (2). An analysis of this expression using Lagrange multipliers shows that the optimum distribution of repeaters is at a distance l km from one another. This recommended value is implicit in (3) which is only valid, however, if each amplifier is fitted with a.g.c. If fixed gain amplifiers are used, with gain adjusted at the minimum ground temperature, then when the latter increases the noise level at the end of the chain of amplifiers will increase and the noise stability of the system will be degraded. Analysis shows that in this case the lengths of the repeater sections should not all be equal but should be greatest in the middle of the trunk and fall off towards either end. Numerical

The Choice of the Parameters of High-Frequency Transistor Amplifiers for Trunk Cables.

calculations however show that the dispersion in length is small and generally speaking in what follows they will be taken as equal. On this basis (6) gives a criterion for setting up communication using fixed-gain amplifiers. The value L in (6) is a limiting one and it can only be extended if repeaters are inserted at closer intervals. For this reason it is common practice to make every k-th repeater with a.g.c. When using valve amplifiers, k is limited by the extent to which it is possible to supply power to the repeater stations. When using transistor amplifiers power requirements are very much lower and it is possible to use a sufficiently large number of repeater stations. Inequality (7) corresponds to the contemporary structure of trunk cables containing both fixed and variable gain amplifiers. Its generality may be judged by putting in $k=1$, giving (3), and $k = L/\ell$, giving (5). The necessary amplifier gains are (8) where $\Delta\beta k\ell$ is the necessary ambit of a.g.c. Generally speaking the line length containing fixed-gain repeaters has a recommended

value but this cannot always be achieved in practice. If it is supposed that the recommended distance between a.g.c. repeater stations is never exceeded, then (9) and (10) enable the number of fixed-gain repeaters to be decided and also the required range of gain adjustment. The numbers of fixed-gain and a.g.c. amplifiers can be found from (12). The overall number of amplifiers may be reduced if the intervals between a.g.c. amplifiers is reduced and fixed-gain repeaters are installed rather further apart. This improvement is obtained at the expense of a wider range of adjustment. Even this may be reduced somewhat by varying the distance between fixed-gain amplifiers. Eq.(16) gives a suitable method of splitting up the total length. In this variant it may be necessary to use artificial lines to restore signal levels or to provide gain adjustment at the inputs to a.g.c. amplifiers. If we include that method of design which tolerates only a narrow range of adjustment on the fixed-gain amplifiers there are 4 possible variants which may be described as follows: 1. Reduction

The Choice of the Parameters of High-Frequency Transistor Amplifiers for Trunk Cables.

of gain; 2. Adjustment within wide limits; 3. Fixed gain; 4. Adjustment within narrow limits. The design procedure recommended is: From (7), $l = \phi(k)$ and $l = \psi(kl)$ are found; from economic considerations k is chosen; using (9), (11) and (14) the required limits of gain adjustment are found; then from (7a), using successive approximation if necessary, k_{III} and l_{III} are found and a precise distribution law for γ_i. The expected number of amplifiers is now found for various methods of distributing the repeater stations, and a comparison of the results determines the most suitable choice in a given case. Figs. 1 and 2 show $\phi(P_v,k)$ and $\psi(P_v, kl)$ for a 60-channel symmetrical cable system. Here $P_o = +0.5$ neper, $P_T = -15.2$ neper and $P_v = +0.5, -0.5, -1.5$ neper. Table 1 gives basic data for a 1200 km trunk line for various values of P_v and k. If we now suppose that $k = 7$ and γ_i is uniformly distributed between 0.45 and 1, then for $P_v = +0.5$ nepers Table 2 plots, for the 4 variants considered above, the maximum and minimum section lengths,

The Choice of the Parameters of High-Frequency Transistor Amplifiers for Trunk Cables.

maximum and minimum gain, the required number of amplifiers and the noise level. Table 3 presents similar data for $P_Y = -0.5$ nepers. Non-linear effects have been neglected altogether but the author hopes to publish a separate paper on this topic. There are 2 figures and 3 tables.

SUBMITTED: July 31, 1958

FARBER, Yu.D., inzh.; SHLIOMOVICH, Ye.M., inzh.

Using amplifiers with semiconductor triodes in nationwide communication service. Vest.sviazi 18 no.11:10-11 N '58. (MIRA 11:12)

1. Montazhnoye upravleniye tresta "Mezhgorsvyaz'stroy."
(Transistor amplifiers)

OGARKOV, Petr Fedorovich; POLYAK, M.U., kand.tekhn.nauk, retsenzent; FARBER, Yu.D., inzh., otv.red.; PETROVA, V.Ye., red.; MARKOCH, K.G., tekhn.red.

[Long distance calls] Mezhdugorodnoe telefonirovanie. Moskva, Gos.izd-vo lit-ry po voprosam sviazi i radio, 1959. 99 p. (MIRA 12:8)

(Telephone lines)

AUTHOR: Farber, Yu.D., Engineer

SOV/111-59-1-15/35

TITLE: Progressive Technology Must Be Introduced into the Construction of Main Cable Lines (Vnedrit' progressivnuyu tekhniku na stroitel'stve kabel'nykh magistraley)

PERIODICAL: Vestnik svyazi, 1959, Nr 1, pp 13 - 14 (USSR)

ABSTRACT: To expedite and improve the construction of cable trunk lines for inter-city telephone communications, the repeater stations should be transistorized, and measuring devices necessary for fault and leak detection and control purposes during the construction should be of a remote-control and visible-recording type.

ASSOCIATION: Montazhnoye upravleniye tresta "Mezhgorsvyaz'stroy" (The Assembly Administration of the "Mezhgorsvyaz'stroy" Trust).

Card 1/1

PHASE I BOOK EXPLOITATION SOV/4781

Farber, Yuliy Davidovich

Izmereniya i nastroyka mnogokanal'nykh sistem uplotneniya simmetrichnykh kabeley svyazi (Measurements and Adjustment of Multichannel Multiplexing Systems of Symmetric Communication Cables) Moscow, Svyaz'izdat, 1960. 238 p. 6,300 copies printed.

Resp. Ed.: E.I. Shishkina; Ed.: V. Ye. Petrova; Tech. Ed.: K.G. Markoch.

PURPOSE: This book is intended for the personnel of long-distance main cable telephone offices. It will also be of use to members of planning organizations and students of communications in institutes and tekhnikums.

COVERAGE: The book attempts to generalize the experience accumulated by the specialized services of the Ministry of Communications, USSR, in carrying out adjustment measurements on its main lines. Problems dealing with the preparation of measurements (the computation of expected parameters), equipment adjustment at terminal and tandem offices, and main line measurements of h-f channels are reviewed. The concluding chapter deals with methods recently

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developed for reducing the time required to make adjustment measurements. The author thanks I.P. Petrushin, Responsible Editor E.I. Shishkina, L. Ya. Burda, Ye. P. Kuznetsov and M.I. Rozovskaya. There are 9 references, all Soviet.

TABLE OF CONTENTS:

FARBER, Yu.D.

Choice of a method for the control of low-frequency transistor amplifiers in principal cable lines. Elektrosviaz' 14 no.5:51-59 My '60. (MIRA 13:8)
(Transistor amplifiers) (Telephone cables)

FARBER, Yu.D., inzh.

New system using symmetric cables in the erection of self-sustaining amplifying centers. Vest. sviazi 20 no.8:3-5 Ag '60. (MIRA 13:10)

(Telecommunication)

DIVNOGORTSEV, Gennadiy Petrovich;NOVIKOV, Vasiliy Aleksandrovich; FARBER, Yuliy Davidovich; BELOUS, V.M., kand. tekhn. nauk, retsenzent; YAKUB, Yu.A., kand. tekhn. nauk, retsenzent; NOVIKOV, V.A., otv. red.; PETROVA, V.Ye., red.; SHEFER, G.I., tekhn.red.

[Long-distance communications apparatus] Apparatura dal'nei sviazi. Moskva, Gos. izd-vo lit-ry po voprosam sviazi i radio, 1961. 439 p. (MIRA 14:11)

(Radio relay lines) (Telephone)

22211
S/106/61/000/001/007/008
A055/A033

6.7110 (1121, 1584)

AUTHOR: Farber, Yu. D.

TITLE: Choosing the circuit of semiconductor repeaters in multichannel systems of multiplexing balanced cables

PERIODICAL: Elektrosvyaz', no. 1, 1961, 58 - 65

TEXT: When vacuum-tube-repeaters are used in multichannel systems of multiplexing balanced cables, the slope of the frequency response curve of the repeaters is controlled by frequency-dependent circuits connected as shown in diagram (a) (see Figure 1). But when semiconductor-repeaters are used, such a connection can give rise to difficulties in obtaining the required characteristics. Therefore, the connecting diagram (b) of figure 1 is resorted to in this case, where two frequency-independent repeaters S_1 and S_2 are used, a line equalizer (with attenuation $b_{l\,eq}$ (f)) being inserted between them. [Abstracter's note: subscript l eq (line equalizer) is a translation of the original лэ (lineynyy vyravnivatel')]. This substitution of diagram (b) for diagram (a) alters, however, the conditions of signal transmission through high-frequency channels and, in particular, the noiseproof feature. The relations used in the choice of the funda-

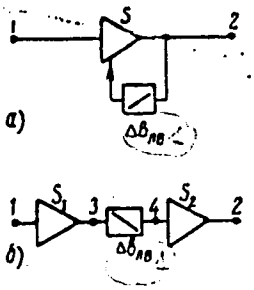
Card 1/2

Choosing the circuit of ....

mental parameters of the repeaters and in the calculation of the channels must be modified accordingly. It proves necessary either to render more severe the requirements set upon the repeaters (as regards the level of the noises generated by them and the attenuation of non-linearity), or to reduce the length of the repeater sections. The author carries out a comparative investigation of both diagrams of figure 1 and, then, a comprehensive analysis of the conditions set by the use of diagram (b). This analysis brings him to the conclusion that the substitution of diagram (b) for diagram (a) is far from being advantageous. The connection of the semiconductor-repeaters according to diagram (a) seems therefore preferable to him. There are 4 figures and 5 Soviet-bloc references.

SUBMITTED: July 5, 1960

Figure 1:
1 - $\Delta b_{1\ eq}$



Card 2/2

FARBER, Yu.D.

Accelerate the use of new technology in the construction of telecommunication systems. Vest.sviazi 21 no.10:13 O '61. (MIRA 14:10)

1. Nachal'nik laboratorii trasta "Mezhgorsvyaz'stroy". (Telecommunication)

36086
S/106/62/000/004/006/010
A055/A101

6.7000
6.2000

AUTHOR: Farber, Yu.D.

TITLE: Choosing the predistortion of the output levels in multichannel HF telephony systems with transistorized repeaters

PERIODICAL: Elektrosvyaz', no. 4, 1962, 38 - 47

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TEXT: This article deals with the determination of the optimum predistortion of the output levels in multichannel systems. Three kinds of interferences are considered. The power of nonlinear interferences, measured at the repeater output in the frequency band of one channel and depending on the order-number n of this channel, is expressed by $P_{nonlin}(n)$. The power of thermal interferences, measured at the repeater output in the frequency band of the channel n, is expressed by $P_T(n, l)$, l being the length of the preceding repeater section. The power of interferences due to linear transitions, measured in channel n in the point with level 0 nep, is expressed by $P_{lin}(0)(n)$. In the absence of predistortion, when the measuring level of all the channels at the output of the repeaters is equal to p_a nep, the interference immunity of channel n is:

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Choosing the predistortion of the output ....

$$\sigma(n) = -\frac{1}{2} \ln \left\{ \left[P'_T (n, 1) + P'_{nonlin} (n) \right] e^{-2p_a} + P'_{lin\ (0)} (n) \right\}, \quad (1)$$

where $P'_T (n, 1)$ and $P'_{nonlin} (n)$ are, respectively, the resultant powers of thermal and nonlinear interferences of all the repeaters in point with level p_a, and $P'_{lin\ (0)} (n)$ is the resultant power of the "linear transitions" interferences of all the sections in point with level 0 nep. In the presence of predistortion, this formula becomes:

$$\sigma_1 (n) = -\frac{1}{2} \ln \left\{ \left[P'_T (n, 1) + P'_{nonlin} (n, p (n)) \right] e^{-2p(n)} + P'_{lin\ (0)} (n) \right\}, \quad (2)$$

p_a being replaced by the predistortion function p (n). If the required quality of communications over a length of L km is ensured at a total power of interferences (in point with level 0 nep) equal to $\alpha (L)$ mw, then:

$$\left[P'_T (n, 1) + P'_{nonlin} (n, p (n)) \right] e^{-2p(n)} = \alpha (L) - P'_{lin\ (0)} (n) . \quad (3)$$

The optimum predistortion function will be the one which permits condition (3) to be satisfied in all the n channels of the system. For practical calculations, the unknown quantities in (3) are 1, p (n) and also $P'_{nonlin} (n, p (n))$ that depends on p (n). The author discusses the optimum choice of 1 and p (n). He proceeds next to an exhaustive analysis of the simplest particular case, where the

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Choosing the predistortion of the output ....

predistortion of the output levels is realized according to the linear law. In this analysis, he determines the spectral distribution of the power of the second-order nonlinear interferences. At the end of the article, he reproduces (for a line of L km with repeater sections of 1 km) a set of expressions permitting the calculation of the quantities contained in formula (3), e.g., P'_T (n, 1) and P'_{nonlin} (n, p (n)). The Soviet personalities mentioned in the article are: A.A. Leshchinskiy and N.E. Popova. There are 4 figures and 3 Soviet-bloc references.

SUBMITTED: November 23, 1961

Card 3/3

FARBER, Yuliy Davydovich; RIZKIN, I.Kh., otv. red.; VOLODARSKAYA, V.Ye., red.; ROMANOVA, S.F., tekhn. red.

[Calculation of the characteristics of multichannel communication systems using transistor amplifiers] Raschet kharakteristik mnogokanal'nykh sistem sviazi s tranzistornymi usiliteliami. Moskva, Sviaz'izdat, 1963. 171 p. (MIRA 17:1)

45682

S/106/63/000/002/005/007
A055/A126

9.3240

AUTHOR: Farber, Yu.D.

TITLE: On the relation between the powers of thermal and nonlinear interferences in multichannel systems with transistorized repeaters

PERIODICAL: Elektrosvyaz', no. 2, 1963, 48 - 57

TEXT: Only the total power of interferences in HF channels has been standardized by the International Telegraph and Telephone Consultative Committee. In his article ("Nachrichten Technik", no. 2, 1962), Krause stated that the powers of thermal and nonlinear interferences must be chosen equal, but there is no indication as to the channel in which this equality must be obtained. It is necessary, therefore, to render more precise the recommendations as regards the distribution of the permissible interference power, account being taken of the parameters of the transistors and multichannel repeaters. In consideration of this, the author examines the frequency dependence of the power of thermal and nonlinear interferences in the channels of a wide-band system with transistorized repeaters, under the assumption that this system must work with sufficiently low

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On the relation between the powers of thermal ....

transmission levels, at which the power of nonlinear interferences of the third order can be neglected. Starting from formulae

$$P_{th(n)} = e^{2(p'_{th\,n}+S_n)}\, e^{-2p_n}, \qquad (1)$$

and

$$P_{nonlin(n)} = 4e^{-2b_{2(0)n}}\, p_{tot}^2\, y_{2n}\, e^{-2p_n}, \qquad (2)$$

where $P_{th(n)}$ and $P_{nonlin(n)}$ are respectively the power of thermal and nonlinear interferences introduced by one line-repeater into the point with relative zero level of channel n, $p'_{th\,n}$ is the level of thermal interferences, measured at the repeater-element input in the frequency band of channel n, S_n is the repeater-element amplification at the mean frequency of the channel, p_n is the measuring transmission-level, $b_{2(0)n}$ is the attenuation of the nonlinearity of the second harmonic with a frequency equal to the mean frequency of the channel at 0-nep signal-level at the repeater output, p_{tot} is the total signal-power at the repeater output and y_{2n} is a coefficient taking into account the part of

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S/106/63/000/002/005/007
A055/A126

On the relation between the powers of thermal ....

the total power of nonlinear products that gets into the frequency band of channel n, the author shows analytically that, in various cases, the equality of the powers of thermal and nonlinear interferences can be obtained only in definite channels; he also specifies the conditions that must be satisfied for obtaining this equality in the highest and lowest channel, respectively, (highest and lowest with regard to frequency). He concludes that it is not expedient to choose in advance a determined relation between the thermal and nonlinear interference powers. He recommends the use of combined predistortions of output levels. There are 2 figures.

SUBMITTED: August 14, 1962

Card 3/3

FARBER, Yu.D.

To the aid of production. Vest. svlazi 24 no.9:26 S '64. (MIRA 17:11)

1. Nachal'nik laboratorii Vsesoyuznogo gosudarstvennogo tresta stroitel'stva sooruzheniy mezhdugorodnoy provolochnoy svyazi.

L 8553-66

ACC NR: AP5011569 SOURCE CODE: UR/0106/65/000/004/0048/0055

AUTHOR: Farber, Yu. D.

ORG: none

TITLE: Dispersion in the attenuations of amplification sections in coaxial cables

SOURCE: Elektrosvyaz', no. 4, 1965, 48-55

TOPIC TAGS: coaxial cable, interference reduction, hf amplifier

ABSTRACT: Formulas are derived for calculating the interference power increment in hf channels due to scattering of attenuations in the amplification sections. These formulas are useful in the development of new multichannel systems as well as during planning and alingment measurements on specific lines with a large number of intermediate points. It is found that when the dispersion of attenuations in the various sections is equal, a minimum interference power increment is achieved by using amplifiers with continuous gain control and fixed nonlinearity damping. In amplifiers with variable nonlinearity damping, the increment in interference power increases with $\Delta a_{3(0)}$, and if $\Delta a_{3(0)}(B) = \Delta a(B)$, these amplifiers have greater interference than those without control adjustment. For the case of damping dispersion in sections which are feasible in actual practice, the interference power increment in channels on lines where amplifiers without control adjustment are used is only slight

Card 1/2 UDC: 621.395.733.018.8

L 8553-66

ACC NR: AP5011569

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ly higher than the corresponding increment on lines which use amplifiers with continuous gain control. When compared with step-controlled amplifiers, the loss in resistance to interference is still more insignificant. Therefore, the author recommends the use of simpler (less expensive and more reliable) amplifiers without control adjustment, at least at most non-serviced amplification points. No matter how far some point may have to be shifted from the design location, all the remaining points should be located as close as possible to the planned spots so that the actual output levels will be as close as possible to nominal. Orig. art. has: 4 figures, 2 tables, 11 formulas.

SUB CODE: EC/ SUBM DATE: 29Jul64/ ORIG REF: 001/ OTH REF: 000

jw

Card 2/2

ARLASHCHENKO, N.I.; BOKHOV, B.B.; BUSYGIN, V.Ye.; VOLOKHOVA, N.A.; GRIGOR'YEV, Yu.C.; POLYAKOV, B.I.; FARBER, Yu.V.

Body reactions during the prolonged effect of coriolis accelerations. Biul. eksp. biol. i med. 56 no.8:28-33 Ag '63.
(MIRA 17:7)

1. Naunbnyy rukovoditel' -- deystvitel'nyy chlen AMN SSSR prof. A.V. Lebedinskiy. Predstavleno deystvitel'nym chlenom AMN SSSR A.V. Lebedinskim.

FARBER, Yu. V.

ACCESSION NR: AT4042699

S/0000/63/000/000/0333/0339

AUTHOR: Lebedinskiy, A. V.; Arlashchenko, N. I.; Bokhov, B. B.; Grigor'yev, Yu.G.; Kvasnikova, L. N.; Farber, Yu. V.

TITLE: The importance of the vestibular analyzer in the selection and training of cosmonauts

SOURCE: Konferentsiya po aviatsionnoy i kosmicheskoy meditsine, 1963. Aviatsionnaya i kosmicheskaya meditsina (Aviation and space medicine); materialy* konferentsii. Moscow, 1963, 333-339

TOPIC TAGS: rotating chamber, tilt table, rotation effect, man, Coriolis acceleration

ABSTRACT: One of the main criteria upon which the system of cosmonaut selection should be based is the evaluation of the vestibular analyzer. The evaluation of other systems (i. e., the visual analyzer, the retina and muscles of the eye, and interoceptors) which enable a cosmonaut to orient himself in space should be of almost equal importance in the selection program. Experience has shown that a

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ACCESSION NR: AT4042699

disruption of information concerning the position or the movement of the body can lead to vegetative disorders. This consideration led to studies of the analyzer systems of each of the cosmonauts, the interaction between analyzer systems, and the condition of vegetative functions during unusual interaction between analyzers (such as the conditions which arise during space flight). The special conditions arising during space flight are limitation of afferentation in a weightless state and the presence of unusual stimulation (vibration, noise, etc.). The differentiated study of the vestibular analyzer should include determination of the threshold sensitivity of the semicircular canals to an adequate stimulus, determination of a reactivity curve during application of angular accelerations of various magnitudes, determination of adaptive abilities to the action of angular acceleration, and tests with Coriolis acceleration. The research on threshold sensitivity of the semicircular canals to adequate stimuli was performed for both positive and negative acceleration. Research performed on fifty healthy persons indicated that the scope of variation of threshold sensitivity is not great. It varies from 0.1 to 0.5° per sec^2 (20 second action of acceleration) for positive accelerations, and 1.5 to 5° per second (for a stop stimulus of 0.15 seconds) for negative accelerations. However, various outside stimuli and physical conditions of the environment can greatly affect the thresholds of vestibular sensitivity. The data

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ACCESSION NR: AT4042699

obtained indicate that the study of vestibular thresholds will be very helpful in the early detection of hidden disturbances in the activity of the analyzer which cannot be detected easily by other means. The most common forms of investigating the functions of the semicircular canals are various rotational tests. Current trends indicate that testing in the near future will be based on methods of minimal stimulation and successive rotations of increasing intensity. Evaluation will have to be based on methods which lend themselves to quantitative analysis. Numerous experiments have shown that training consisting of the systematic stimulation of the vestibular mechanism with the aid of various exercises or rotational tests increases the vestibular stability of the subjects. The speed with which adaptation takes place varies with each individual. This results in the problem of developing a test for the objective evaluation of the degree of adaptation. Tests based on registration of nystagmus are inadequate because they fail to take into account the vegetative complex. Apparently, the real picture of receptive qualities of the vestibular analyzer can only be obtained from a subjective evaluation involving vestibular-vegetative, vestibular-somatic, and sensory reactions arising in response to repeated stimulations. Laboratory studies are currently being conducted in this area. The use of Coriolis accelerations as a test has as its purpose the study of the summary reaction which arises in labyrinth recept-

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ors in response to stimulation obtained during the combined action of angular and linear accelerations. Laboratory tests with the periodic application of Coriolis accelerations accompanied by slow rotation have indicated that even a short rotation leads to a disruption of walking, to a change in skin temperature, and to a change in the pulse frequency. At the same time, a lowering of the threshold of sensitivity to Coriolis accelerations was noted without the threshold for angular acceleration being affected. A very interesting interrelationship exists between the vestibular and optical analyzers. Laboratory experiments have confirmed that stimulation of the retina has an inhibiting effect on the vestibular analyzer. Tests have indicated that the result of interaction between the optical and the vestibular stimuli is determined by the functional condition of the vestibular analyzer. It became apparent that if the excitability of the vestibular analyzer was increased by radioactivity, inhibition of spontaneously arising nystagmus by optical stimulation of the retina became more distinct. The level of excitability of the vestibular analyzer was achieved by means of radioactive tare.

ASSOCIATION: none

Submitted: 27 Sept 63

Card 4/5

FARBER, Yu. V. .7

ACCESSION NR: AT4042700 S/0000/63/000/000/0339/0343

AUTHOR: Lebedinskiy, A. V.; Arlashchenko, N. I.; Busy°gin, V. Ye.; Vartbaronov, R. A.; Vesselov, A. S.; Volokhova, N. A.; Grigor'yev, Yu. G.; Yemel'yanov, M. D.; Kalyayeva, T. V.; Kry°lov, Yu. V.; Polyakov, B. I.; Farber, Yu. V.

TITLE: Effects of Coriolis accelerations on the human organism

SOURCE: Konferentsiya po aviatsionnoy i kosmicheskoy meditsine, 1963. Aviatsionnaya i kosmicheskaya meditsina (Aviation and space medicine); materialy° konferentsii. Moscow, 1963, 339-343

TOPIC TAGS: vestibular analyser, cosmonaut selection, cosmonaut training, semicircular canal, acceleration, rotation, nystagmus, optical analyzer, Coriolis acceleration

ABSTRACT: Studies of the effect of prolonged Coriolis accelerations on the human organism must be made as a preliminary step toward the creation of artificial gravity in spaceships. Studies were performed in a slowly rotating MBK-1 chamber (a cylindrically shaped room 2.1 m in diameter and 2.3 m high, equipped with two armchairs). In the first series of experiments, 13 healthy persons were subjected

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ACCESSION NR: AT4042700

to prolonged rotation of 1 to 5 hours at an angular velocity of 5.3°/sec. In the second series of experiments, 4 subjects were rotated for 24 hours at angular velocities of 5.3, 10.6, and 21.2°/sec. Coriolis accelerations were created periodically by tilting the body and head in a plane perpendicular to the plane of rotation of the chamber at the rate of 1 movement/sec. Prolonged stay of subjects with normal vestibular sensitivity under conditions of rotation at 5.3, 10.6, and 21.2°/sec resulted in functional changes in the condition of the central nervous system and the cardiovascular system, and in disruption of the body temperature control and the balancing function. The degree of vegetative disorders was found to be directly proportional to the speed of rotation and the degree of vestibular sensitivity of the subjects. During cumulative action of Coriolis accelerations, the majority of the subjects developed an adaptation which was noted from 1 to 5 hours after beginning of the rotation. On the basis of the results obtained, the method of prolonged slow rotation is recommended for training purposes.

ASSOCIATION: none

SUBMITTED: 27Sep63 ENCL: 00 SUB CODE: LS

NO REF SOV: 000 OTHER: 000

Card 2/2

L 10272-66 EWT(1)/FS(v)-3 DD

ACC NR: AP5028883 SOURCE CODE: UR/0219/65/060/011/0003/0006

AUTHOR: Grigor'yev, Yu. G. (Moscow); Farber, Yu. V. (Moscow)

ORG: none

TITLE: The functional condition of the vestibular analyzer in man during a 120-day stay in a hermetically sealed chamber

SOURCE: Byulleten' eksperimental'noy biologii i meditsiny, v. 60, no. 11, 1965, 3-6

TOPIC TAGS: vestibular analyzer, stimulus, cerebral cotex, counterrotation illusion, vestibular function, nystagmus

ABSTRACT: The demonstrated ability of inadequate vestibular stimuli to affect vestibular function was studied in conditions simulating life inside a spaceship. Five healthy men aged 19—32 stayed in a hermetically sealed chamber for 120 days during which time they were examined at monthly intervals. Examination was also conducted 3, 8, 18, and 33 days after they had left the chamber. The threshold of vestibular sensitivity (to an adequate stimulus) was determined on a rotating chair with the subject's head fixed at a 30° angle to the axis of rotation. The adequate stimulus consisted of the negative angular acceleration which developed when the chair stopped. Vestibular sensitivity was judged by the appearance of nystagmus and the illusion of counterrotation. There was a direct correlation between the magnitude of the stimu-

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L 10272-66

ACC NR: AP5028883 O

lus and the length of nystagmus in all subjects. Experimental results showed changes in nystagmus during the subject's stay in the sealed compartment: both the duration of nystagmus and the slope of plotted nystagmus curves decreased. Individual differences were noted in the pattern of decrease of these factors. No reliable changes were observed in vestibular autonomic reactions during the observation period (arterial pressure, pulse rate, etc.). The threshold of sensitivity to nystagmus changed very little. By the end of the experiment, changes in cupulograms were similar for all subjects; hence, the medium which the subjects inhabited definitely influenced the condition of the vestibular analyzer. The fact that adequate vestibular stimuli are absent in these experimental conditions (with the exception of some limited motor activity) is a strong indication that the changes observed in nystagmus probably reflect functional changes in the cerebral cortex rather than changes in the receptor apparatus of the vestibular analyzer. Furthermore, increases in thresholds of the sensory component of the vestibular reaction (illusion of counterrotation) observed after subjects left the chamber were probably due to readaptation to a new routine and different physical conditions. Orig. art. has: 3 tables. [JS]

SUB CODE: 06/ SUBM DATE: 18Jan65/ ORIG REF: 005/ OTH REF: 003/ ATD PRESS: 4164

OC

Card 2/2

L 08851-67 EWT(1) SCTB DD/GD

ACC NR: AT6030676 SOURCE CODE: UR/0000/66/000/000/0370/0371

AUTHOR: Farber, Yu. V.

ORG: none

TITLE: Problem of obtaining quantitative characteristics of the functional state of the human vestibular analyzer by means of rotation tests [Paper presented at the Conference on Problems of Space Medicine held in Moscow from 24-27 May 1966]

SOURCE: Konferentsiya po problemam kosmicheskoy meditsiny, 1966. Problemy kosmicheskoy meditsiny. (Problems of space medicine); materialy konferentsii, Moscow, 1966, 370-371

TOPIC TAGS: biologic acceleration effect, coriolis acceleration, vestibular function, vestibular analyzer, nystagmus, electroretinography, visual analyzer

ABSTRACT:
A number of investigators have established a logarithmic dependence between the magnitude of angular acceleration and duration of nystagmus and postrotational illusions which occur only within a definite range. The problem of repeating results from test to test has not been solved relative to the use of threshold and subthreshold values of angular accelerations. It is proposed that correlation between sensory and somatic reactions during

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ACC NR: AT6036676

threshold and subthreshold stimulation of the vestibular analyzer should be attempted.

Fifty male subjects were examined on a VU-2 (Yu. G. Grigor'yev, V. V. Bo[illegible]v) electrical rotating unit. The duration of postrotational illusion, nystagmus, and the number of nystagmic movements in response to stop-stimuli (negative angular acceleration expressed in units of angular rate) were studied. The following stimuli were administered during subthreshold tests: 15, 30, 60, 90, 120, 150, and 180° /sec. Nystagmus was recorded electronystagmographically and the data were processed statistically.

It was found that the duration of postrotational reactions was proportional to the logarithm of stop-stimuli: for postrotational illusion, up to 60° /sec; for nystagmus, up to 60—90° /sec; for a number of nystagmic movements, up to 90—120° /sec. It was proposed that the use of stimuli exceeding set values for sensory and somatic reactions influences the functional capacity of the human vestibular analyzer. It was further shown that there is no threshold and duration dependence between nystagmus and postrotational illusion. It was established that during a vestibular stimulus duration within two seconds, a constant time product of acceleration (called Mul'der's law) is observed.

[W.A. No. 22; ATD Report 66-1167]

Card 2/2 SUB CODE: 06 / SUBM DATE: 00May66

SHAKHTAKHTINSKIY, T.N.; SADYKHOVA, Kh.I.; FARBERG, Z.M.

Preparation of maleic anhydride by the catalytic oxidation of butylenes in a fluidized bed of a catalyst. Azerb. khim. zhur. no. 2:91-94 '65. (MIRA 18:12)

1. Institut neftekhimicheskikh protsessov AN AzerSSR. Submitted Sept. 10, 1964.

YERMOLENKO, A.I., Prof., FARBERMAN, V.I., kand.med.nauk., SITKEVICH, V.Yu.

Current picture of the patients in a septic surgery department and polyclinic. Sov.med. 22 no.11:109-113 N'58 (MIRA 11:11)

1. Iz gospital'noy khirurgicheskoy kliniki (zav. - prof. A.V. Smirnov) Leningradskogo sanitarno-gigiyenicheskogo instituta.
(HOSPITALS,
septic surg., department (Rus))
(OUTPATIENTS SERVICES,
surg. (Rus))

FARBERMAN, V.I. (Leningrad)

Humeroscapular periarthritis; clinical aspects, pathogenesis, diagnosis, and treatment. Sov.med. 23 no.12:108-110 D '59. (MIRA 13:4)

(SHOULDER dis.)

AVER'YANOV, V.; GORSHKOV, A.P.; DZHERRASHYAN, R.A.; FARBEROV, A.; SHTEYNBERG, G.S.

Crater of the Klyuchevskaya Sopka in September 1962. Biul. vulk. sta. no.37:33 '64. (MIRA 18:3)

POPOV, V.V.; FARBAROV, A.I.

Effect of light on corneal induction. Nauch.dokl.vys.shkoly; biol.nauki no.3:48-60 '58. (MIRA 11:12)

1. Predstavlena kafedroy embriologii Moskovskogo gosudarstvennogo universiteta imeni M.V.Lomonosova.
(CORNEA) (LIGHT--PHYSIOLOGICAL EFFECT)

POPOV, V.V.; FARBEROV, A.I.

Electroretinogram of the irradiated eye and induction of the cornea. Izv. AN SSSR. Ser. biol. 27 no.1:102-105 Ja-F '62. (MIRA 15:3)

1. Chair of Embryology, Moscow State University.
(CORNEA TRANSPLANTATION)
(RADIATION--PHYSIOLOGICAL EFFECT)

SIRIN, A.N.; FARBEROV, A.I.

Eruption of the Ploskiy Tolbachik Volcano in 1961-1962.
Biul. Vulk. sta. no.34:8-11 '63. (MIRA 16:10)

KIRSANOV, I.T.; SERAFIMOVA, Ye.K.; SIDOROV, S.S.; TRUBENKO, V.F.; FARBEROV, A.I.; FEDORCHENKO, V.A.; SHILOV, V.N.

Eruption of the Ebeko Volcano from March to April, 1963. Biul. vulk. sta. no.36:66-72 '64. (MIRA 17:9)

FARBEROV, A.I.; SOKOLOVA, Z.A.; POPOV, V.V.

Effect of X-ray irradiation on the retina of grass frog.
Radiobiologiia 5 no.2:319-320 '65. (MIRA 18:12)

1. Moskovskiy gosudarstvennyy universitet imeni Lomonosova.

ACC NR: AT6036299 SOURCE CODE: UR/3233/66/000/041/0020/0024

AUTHOR: Corel'chik, V. I.; Farberov, A. I.

ORG: none

TITLE: Recording of near earthquakes at the Avacha seismic station

SOURCE: AN SSSR. Sibirskoye otdeleniye. Institut vulkanologii. Byulleten' vulkanologicheskikh stantsiy, no. 41, 1966, 20-24

TOPIC TAGS: ~~near earthquake~~, earthquake, seismic wave, ~~recording, earthquake intensity~~, seismography

ABSTRACT: To measure the influence of local geologic conditions on the recording of near earthquakes, records obtained at the Avacha seismic station situated on a loosely consolidated ground layer were compared with those obtained at the Petropavlovsk station situated on solid rock 27 km away, and at the Verblyud station situated on extrusive rocks. The Avacha station is located over a Cretaceous crystalline basement having a density of 2.3 g/cm^3 and an average longitudinal-wave velocity of 4.0 km/sec. This basement is covered by a 2500-m thick layer of redeposited pyroclastic material having a density of 2.0 g/cm^3 and a longitudinal-wave velocity of 2 km/sec. VEGIK seismographs, GB-IV galvanometers and RS-2 recorders were used in the tests. Studies showed that oscillation records at the Avacha station were distorted as the result of the natural oscillations of the loosely

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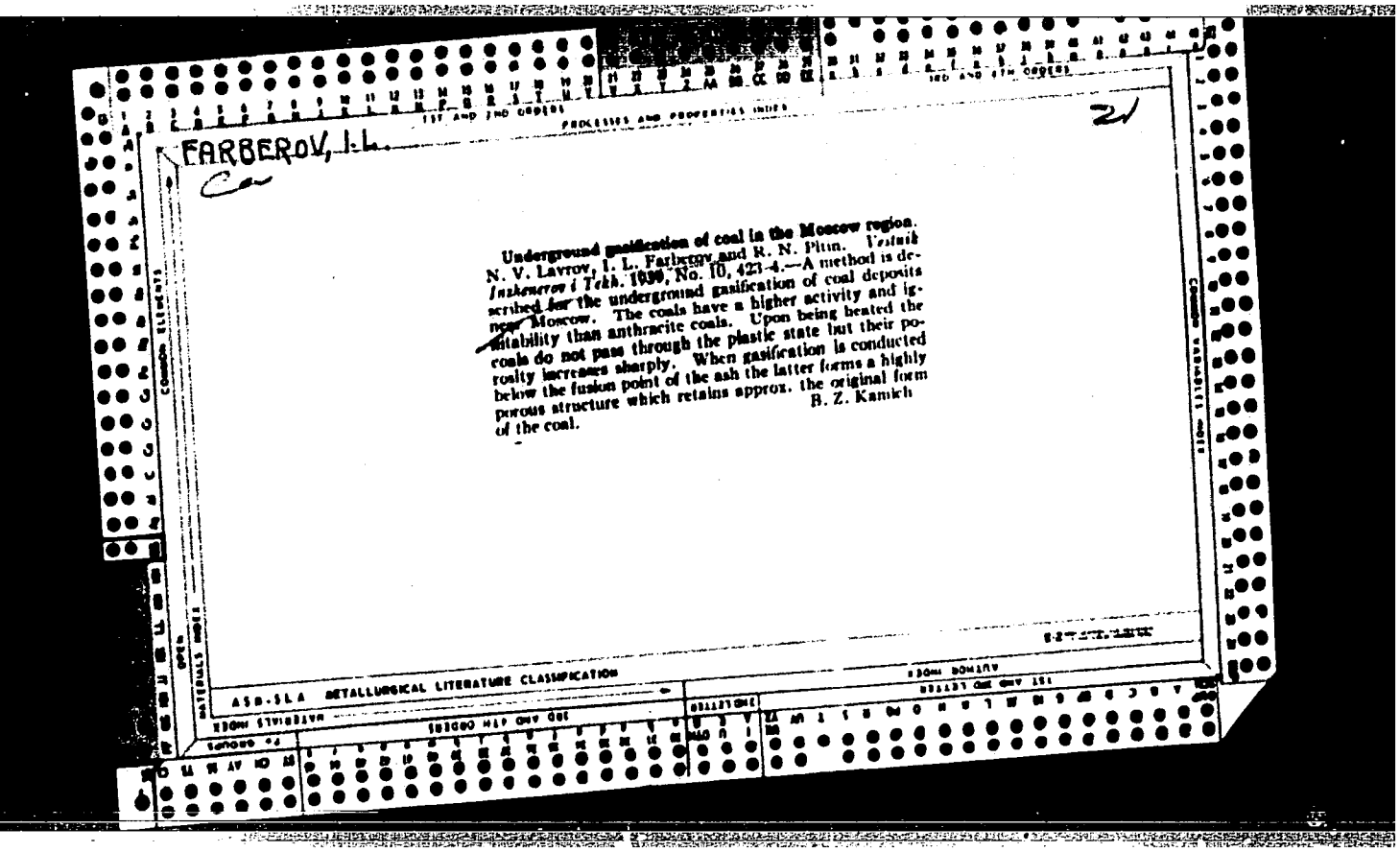
ACC NR: AT6036299

consolidated ground layer. The amplitude of the soil-displacement rate at Avacha was 2.6 times greater than that of the extrusive rocks of Verblyud. The intensity of earthquakes recorded at the Avacha station was found to be about 1 scale degree higher than that recorded at the stations located on solid rock. Orig. art. has: 2 figures and 2 formulas.

SUB CODE: 08/ SUBM DATE: none/ ORIG REF: 006/ ATD PRESS: 5106

Card 2/2



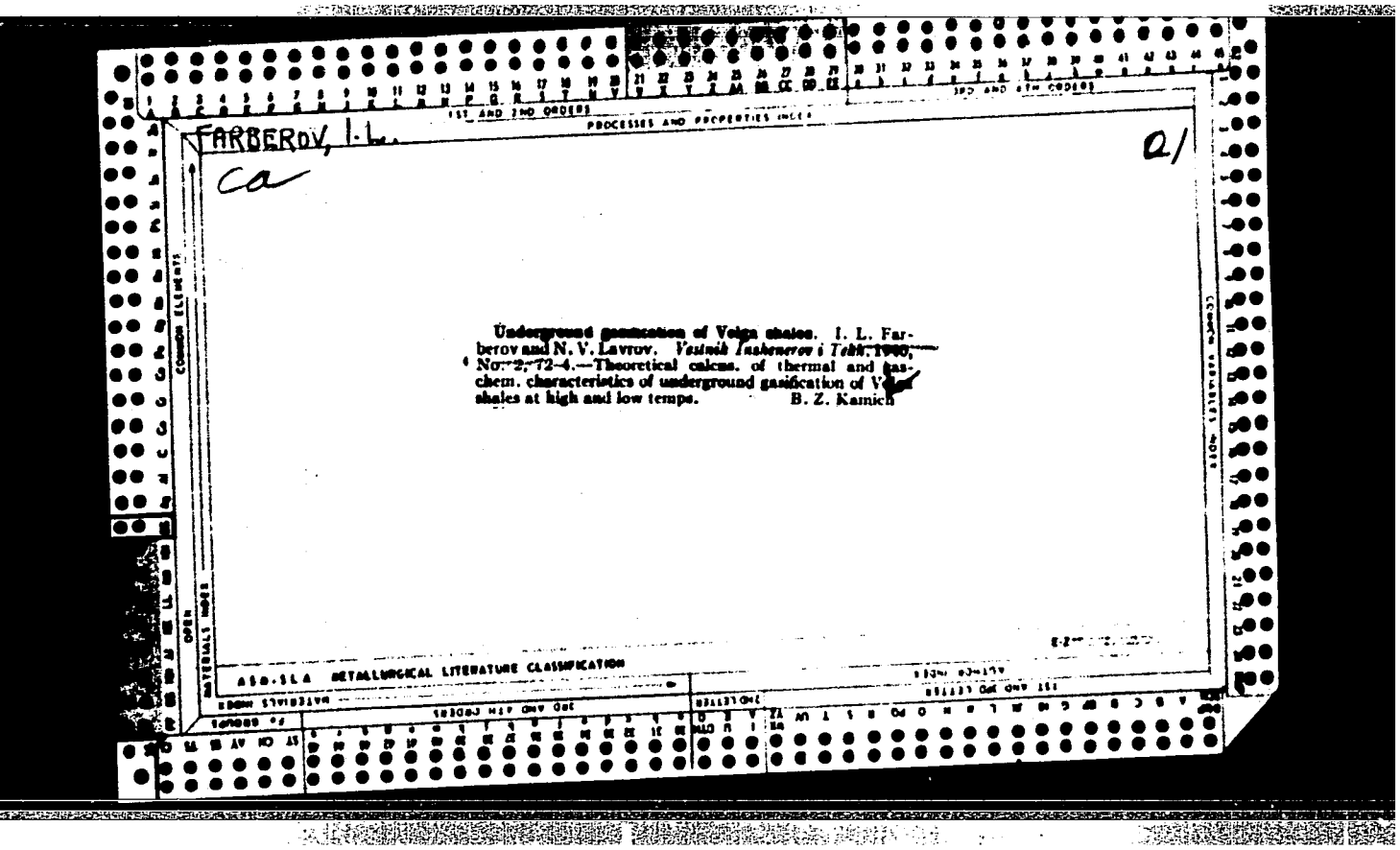
FARBEROV, I. L.

Ca

21

Underground gasification of coal in the Moscow region. N. V. Lavrov, I. L. Farberov and R. N. Plun. *Vestnik Inzhenerov i Tekh.* 1939, No. 10, 423-4.—A method is described for the underground gasification of coal deposits near Moscow. The coals have a higher activity and ignitability than anthracite coals. Upon being heated the coals do not pass through the plastic state but their porosity increases sharply. When gasification is conducted below the fusion point of the ash the latter forms a highly porous structure which retains approx. the original form of the coal.

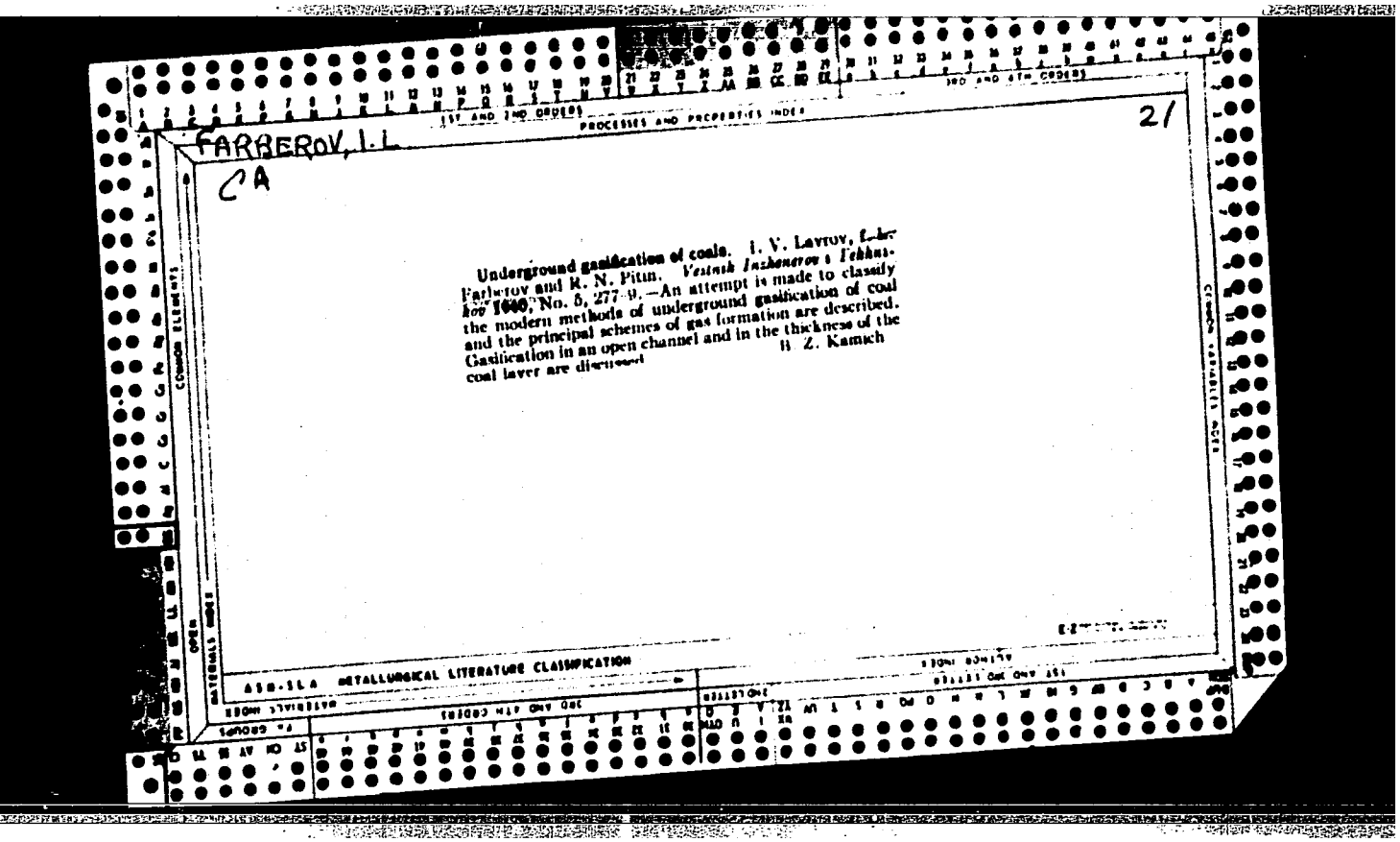
B. Z. Kamich



LAVROV, N. V., PITIN, R. N., FARBEROV, L.

"Underground Gasification of Moscow-Basin Coal in a Filtration Channel," Iz. Ak. Nauk SSSR, Otdel. Tekh. Nauk, No. 4, 1940.

Report U-1530, 25 Oct 1951



FARBEROV, I.L.

CHERNYSHEV, A.B., AND FARBEROV, I.L.

Corresponding Members, Academy of Sciences, USSR (-1944-)

Power Engineering Institute imeni G.M. Krzhizhanovskiy, Academy of Sciences, USSR (-1944-)

"Concerning Expansion of Combustion Hearth in Continuous Underground Gas Generator". Iz. Ak. Nauk. SSSR. Otdel. Tekh. Nauk. No1 12, 1944

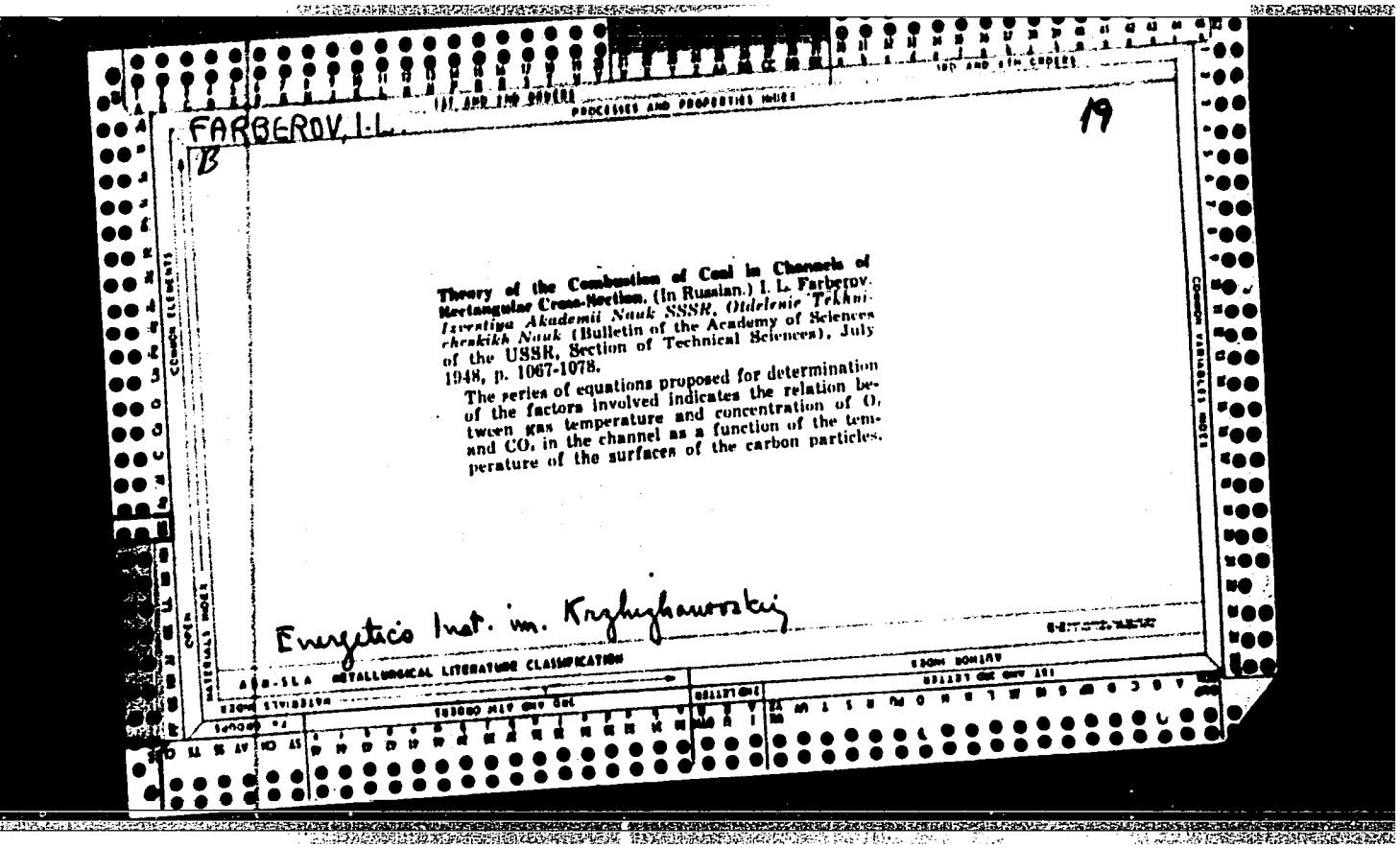
FARBEROV, I. L.

"Filtration of a Gas by a Reactive Porous Medium," by A. B. Chernyshev, A. A. Pomerantsev, I. L. Farberov, Dok. Akad. Nauk. SSSR 56, 727-9 (1947).

Translation- DRB, Canada, T156R, Nov 54

FARBEROV, I. L. and PITIN, R. N.

"Underground GAsification of Coal (Podzemnaya Gazifikatsiya Ugley) /Publications of the Academy of Sciences of the USSR, 1948.



FARBEROV, I.L.

B

19

Theory of the Combustion of Coal in Channels of Rectangular Cross-Section. (In Russian.) I. L. Farberov. *Izvestiya Akademii Nauk SSSR, Otdelenie Tekhnicheskikh Nauk* (Bulletin of the Academy of Sciences of the USSR, Section of Technical Sciences), July 1948, p. 1067-1078.

The series of equations proposed for determination of the factors involved indicates the relation between gas temperature and concentration of O_2 and CO_2 in the channel as a function of the temperature of the surfaces of the carbon particles.

Energetics Inst. im. Krzhizhanovskij

METALLURGICAL LITERATURE CLASSIFICATION

FARBEROV, I. L.

USSR.

Andrei Borisovich Chernyshev (1904-1953). I. L. Farberov. *Trudy Inst. Goryuch. Iskopaemykh, Akad. Nauk S.S.S.R.* 3, 5-8(1954).—An obituary with portrait.
W. M. Sternberg.

FARBEROV, I.L.

PITIN,R.N.; FARBEROV,I.L.; FRIDMAN,G.E., redaktor; TERPIGOREV,A.M., akademik, redaktor; POLESITSKAYA,S.M., tekhnicheskiy redaktor

[Underground coal gasification] Podzemnaia gazifikatsiia. Moskva, Izd-vo Akademii nauk SSSR, 1955.78 p. (MLRA 9:1)
(Coal--Gasification, Underground)

CHERNYSHEV, Andrey Borisovich; LAVROV, N.V., doktor tekhnicheskikh nauk, otvetstvennyy redaktor; FARBEROV, I.L., doktor tekhnicheskikh nauk, redaktor; SHISHAKOV, N.V., doktor tekhnicheskikh nauk, redaktor; AL'TSHULER, V.S., doktor tekhnicheskikh nauk, redaktor; IVANOV, V.M., kandidat tekhnicheskikh nauk, redaktor; PITIN, R.N., kandidat tekhnicheskikh nauk, redaktor; KLIMOV, V.A., redaktor izdatel'stva; SOMOROV, B.A., tekhnicheskiy redaktor

[Selected works] Izbrannye trudy. Moskva, Izd-vo Akademii nauk SSSR, 1956. 368 p. (MLRA 9:8)

1. Chlen-korrespondent AN SSSR (for Chernyshev)
(Coal gasification)

3

4382. TEMPERATURE FIELD IN HEATING OF COAL BY ELECTRIC CURRENT. Krukovskii, V.K. and Farberov, I.L. (Izv. Akad. Nauk SSSR, Otdel. Tekn. Nauk (Bull. Acad. Sci. U.S.S.R., Sect. Tech. Sci.), June 1956, 101-107). Experiments are recorded on the coking of Lisichansk coal containing [illegible] moisture, 4.94% ash and 40.76% volatiles. A solid block or a granular charge of the coal was placed in an insulated box, a cylinder of coke was placed in the major axis of it and current from a welding transformer applied to the ends of the cylinder. An expression was obtained for the relationship of maximum temperature and energy consumption to power, and the following figures were obtained: energy consumption in kWh/kg for the solid block 0.7 at 550°C and 0.78 at 800°C, and for the granular charge 0.45 and 0.61. The corresponding efficiencies (heat required for coking over heat expended) were 26.5 and 35% for the block and 41 and 45% for the charge.

4383. EXPANSION OF THE CONDUCTING CHANNEL IN TREATMENT OF SOLID FOSSIL FUELS WITH AN ELECTRIC CURRENT. Bondarenko, S.T. (Izv. Akad. Nauk SSSR, Otdel. Tekh. Nauk (Bull. Acad. Sci. U.S.S.R., Sect. Tech. Sci.), June 1956, 108-112). The case of a block of coal being heated by a current passing through a cylindrical conducting channel is examined theoretically and an expression obtained for the increase in the radius of the channel with time. The expression is compared with the experimental data from work described in the preceding abstract and elsewhere.

KRUKOVSKIY, V.K.; FARBEROV, I.L.

Investigating the process of heating a coal block with an electric current. Trudy IGI 7:23-29 '57. (MLRA 10:6)
(Coal gasification, Underground)
(Electric currents--Heating effects)

FARBEROV, I.L.

Heating process of "kukkersite" oil shales. Trudy [illegible] 7:41-43 '57.
(Shale) (Coal gasification, Underground) (MLRA 10:6)

FARBEROV I.L.

PITIN, R.N.; SPORIUS, A.E.; FARBEROV, I.L.

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